

40. (New) An isolated nucleic acid molecule comprising the nucleotide sequence set forth in SEQ ID NO:1, or a complement thereof.

41. (New) An isolated nucleic acid molecule consisting of the nucleotide sequence set forth in SEQ ID NO:1, or a complement thereof.

42. (New) An isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2, or a complement thereof.

43. (New) An isolated nucleic acid molecule which encodes a polypeptide consisting of the amino acid sequence set forth in SEQ ID NO:2, or a complement thereof.

44. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a phosphoenolpyruvate: sugar phosphotransferase system polypeptide which is capable of modulating the transport of a high-energy carbon molecule.

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45. (New) An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a phosphoenolpyruvate: sugar phosphotransferase system polypeptide which is capable of modulating the transport of a high-energy carbon molecule.

46. (New) An isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a phosphoenolpyruvate: sugar phosphotransferase system polypeptide which is capable of modulating the production of a fine chemical.

47. (New) An isolated nucleic acid molecule consisting of a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof, wherein said nucleotide sequence encodes a phosphoenolpyruvate: sugar phosphotransferase system protein polypeptide which is capable of modulating the production of a fine chemical.

48. (New) An isolated nucleic acid molecule comprising at least 100 nucleotides of the nucleotide sequence of SEQ ID NO:1.

49. (New) An isolated nucleic acid molecule which encodes a phosphoenolpyruvate: sugar phosphotransferase system polypeptide comprising at least 100 contiguous amino acid residues of the amino acid sequence of SEQ ID NO:2.

50. (New) An isolated nucleic acid molecule comprising the nucleic acid molecule of any one of claims 40-43, and a nucleotide sequence encoding a heterologous polypeptide.

51. (New) A vector comprising the nucleic acid molecule of any one of claims 40-43.

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52. (New) The vector of claim 51, which is an expression vector.

53. (New) A host cell transfected with the expression vector of claim 52.

54. (New) The host cell of claim 53, wherein said cell is a bacterial cell.

55. (New) The host cell of claim 54, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium*.

56. (New) The host cell of claim 55, wherein the expression of said nucleic acid molecule results in the modulation in production of a fine chemical by said cell.

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57. (New) The host cell of claim 56, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and unsaturated fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides, and enzymes.

58. (New) The isolated nucleic acid molecule of any one of claims 42, 43, 44, or 45, wherein said polypeptide is capable of modulating the transport of sucrose.
